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(54) Title: CELLULAR LABELING FOR NUCLEAR MAGNETIC RESONANCE TECHNIQUES

(57) Abstract: The disclosure provides, in part, fluorocarbon imaging reagents and formulations for the *ex vivo* labeling of cells. Labeled cells may be detected in vivo or *ex vivo* by a nuclear magnetic resonance technique, such as magnetic resonance imaging (MRI) or magnetic resonance spectroscopy (MRS). The disclosure additionally provides methods for using the imaging reagents in a variety of clinical procedures.